Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 1/18

105

Fig. 1

100

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 2/18

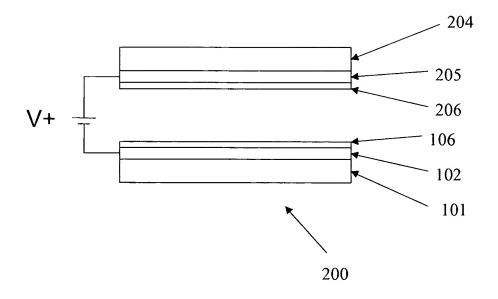


Fig. 2

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 3/18

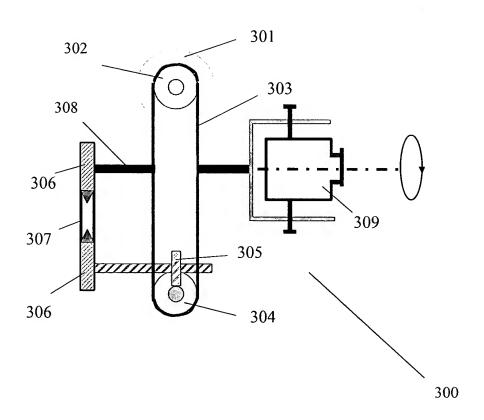


Fig. 3

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 4/18

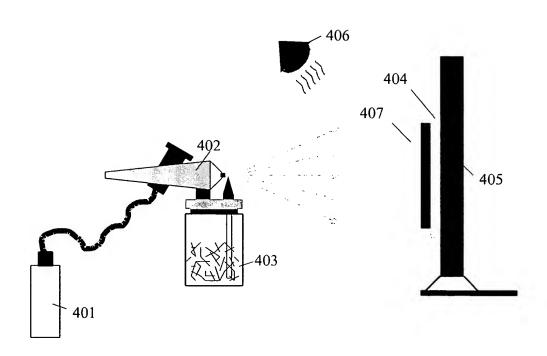
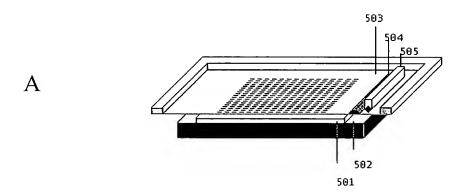
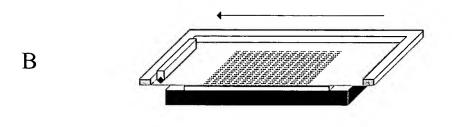


Fig. 4

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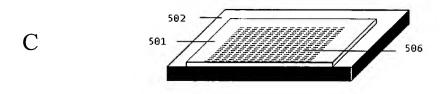


Fig. 5

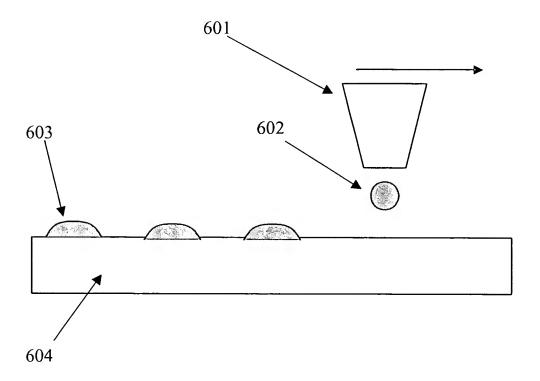


Fig. 6

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 7/18

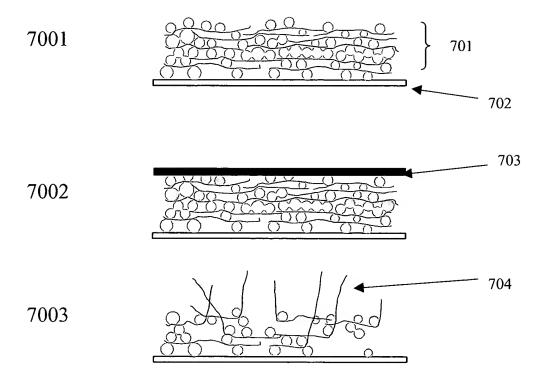


Fig. 7

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 8/18

A 90CNT10ANP-NT 200,000 X В

Fig. 8

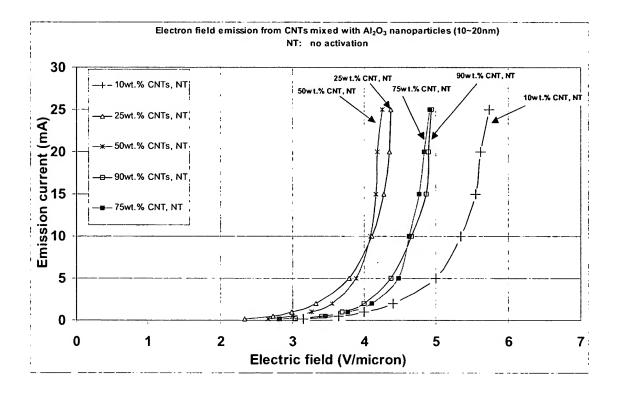
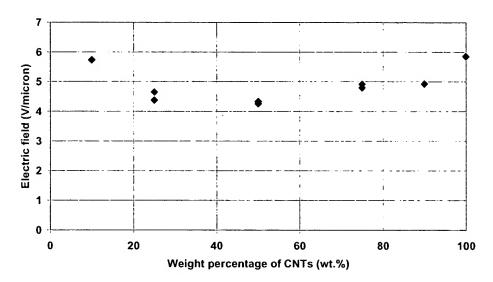


Fig. 9

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 10/18

## Electric field vs CNTs concentration mixed with Al<sub>2</sub>O<sub>3</sub> nanoparticles at emission current of 25mA (6.25mA/cm<sup>2</sup>): No activation process



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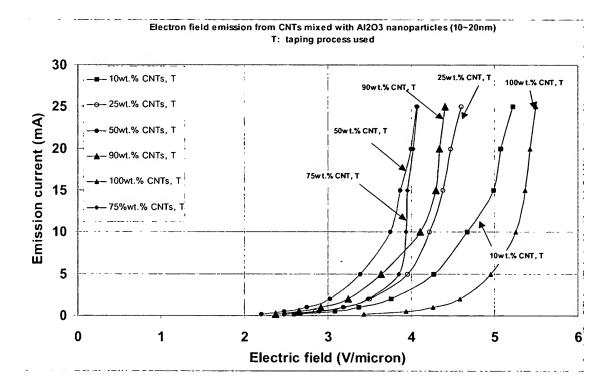


Fig. 11

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## Electric field vs CNTs concentration mixed with Al<sub>2</sub>O<sub>3</sub> nanoparticles at emission current of 25mA (6.25mA/cm<sup>2</sup>): Activation process

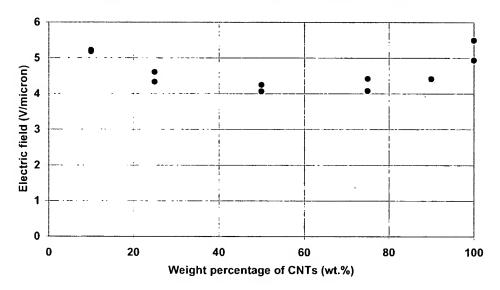


Fig. 12

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 13/18

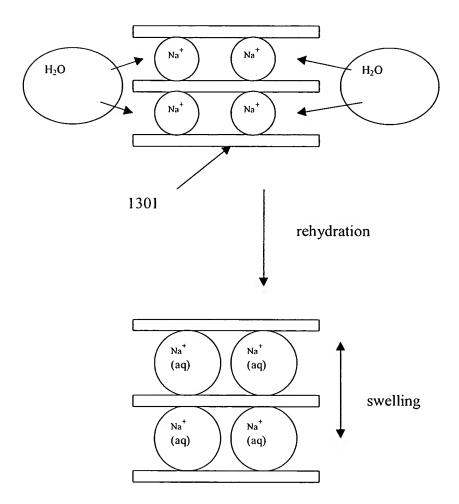


Fig. 13

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 14/18

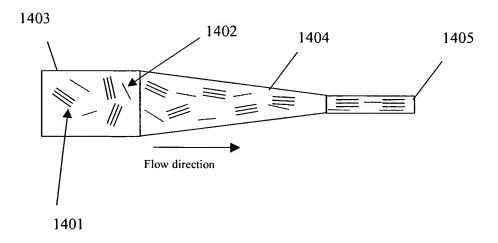


Fig. 14

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 15/18

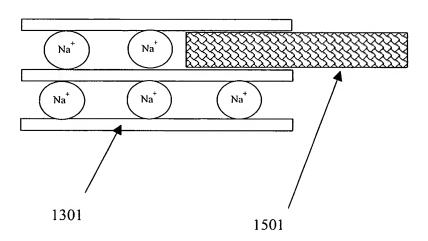


Fig. 15



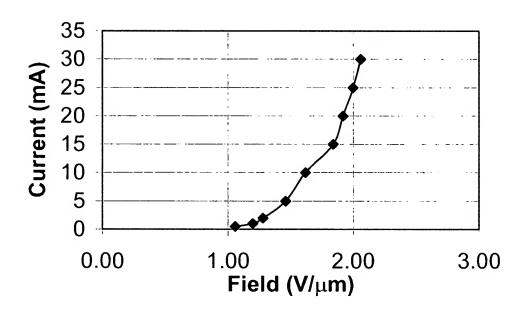


Fig. 16

Title: Enhanced Field Emission... Inv.: Mao Atty. Dkt. No.: 12179-P115US Sheet: 17/18

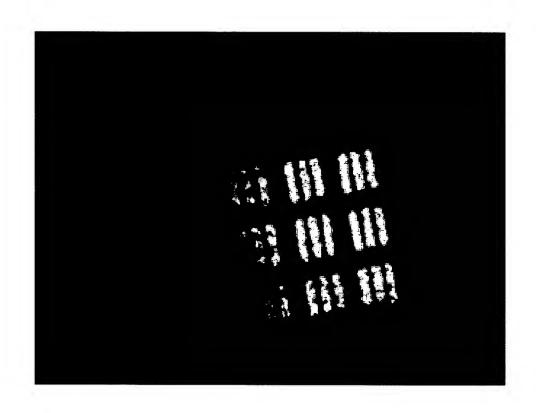


Fig. 17

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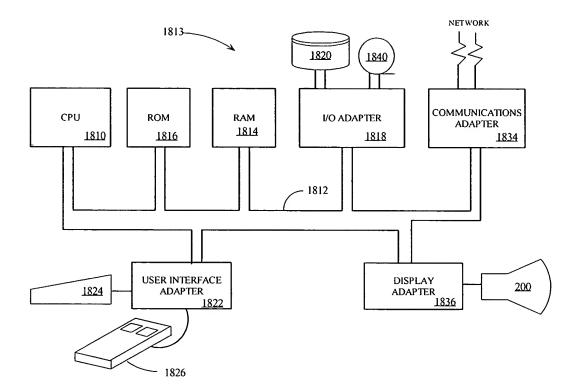


Fig. 18